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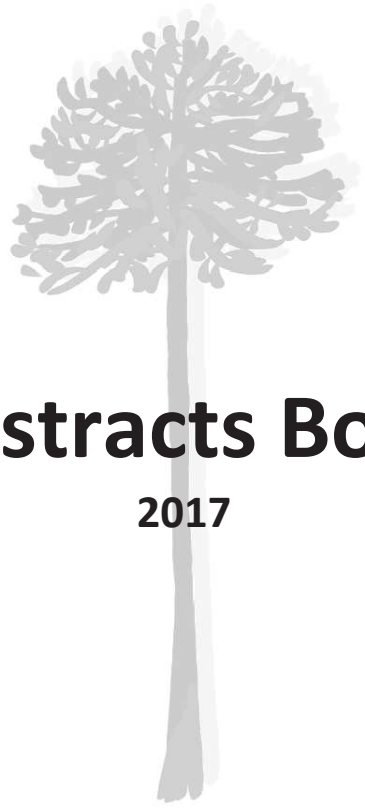

Abstracts Book

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Edited by:

Marjorie Reyes

Ana Luengo

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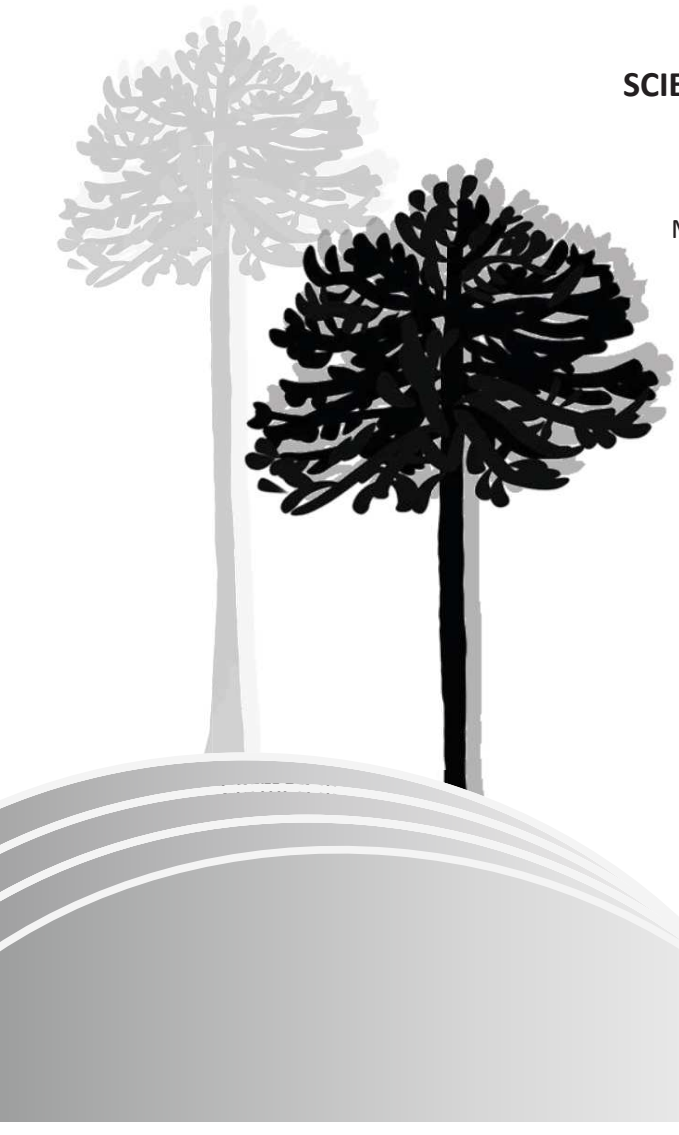

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POSTER

WILL FUNGAL STRAINS PRESERVED IN CULTURE COLLECTIONS MAINTAIN THE SAME BIOTECHNOLOGICAL PERFORMANCE AFTER YEARS OF PRESERVATION?

Soto I[1], Rodriguez R[1,2], Lopez[1], Nicol Burgos[1], Adonis Rocha[1], Marta Simões[3], Cledir Santos[1]*, Nelson Lima[2]

[1]Chilean Culture Collection of Type Strains, BIOREN-UFRO Scientific and Technological Bioresource Nucleus, Universidad de La Frontera, Temuco 4811-230, Chile. [2]CEB-Centre of Biological Engineering, Micoteca da Universidade do Minho, University of Minho, Campus of Gualtar, Braga, Portugal. [3]Department of Biology, Edge Hill University, Ormskirk, Lancashire, United Kingdom
*Corresponding author: cledir.santos@ufrontera.cl

The methods of fungal preservation currently used are highly empirical and, in many instances, there is not clear information if it provides reliable genetic and phenotypic stability. Freeze-drying is commonly used to preserve fungal strains. However, genetic and phenotypic alterations after long term-storage are yet unknown. The goal of the present study was to evaluate the freeze-drying preservation method for the effective long-term preservation of strains belonging to *Aspergillus* section *Nigri*.

Twenty-one strains representative of *Aspergillus* section *Nigri* were selected and preserved by freeze-drying. Strains were subjected to accelerated storage by subject the ampoules temperature at 37 °C for 4 weeks. Samples were morphological, physiological and genotypic analysed. For morphological changes assessment, fungi were grown for 7 days at 25 °C on 4 different culture media. Ochratoxin A and fumonisin B2 were assessed by HPLC. DNA fingerprinting techniques using the oligonucleotides M13 and $(GACA)_4$ were performed. All assays were evaluated at 3 points in time: before preservation, and 2 and 4 weeks after preservation.

At morphological and mycotoxigenic point of view, no changes were observed before and after ageing. However, after ageing different DNA fingerprinting was observed. It means that fungal strains preserved in freeze-dried ampoule could affect the biotechnological performance of fungi within the time of preservation.

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